

REMARKS

Claims 1-11, 14, 16, and 18-27 are pending in the application upon entry of the instant Amendment.

Claims Objections

Claim 18 is objected to because it is missing from the list of claims.

Owing to a word processing error in the preparation of the prior Amendment (received in the Patent and Trademark Office November 15, 2005), claims 10 through 18 were erroneously numbered as claims 9 through 17. Thus, there were two claims numbered 9 and no claim numbered 18. The present Amendment provides a correct enumeration of the claims.

Claims Rejections - 35 U.S.C. § 112

Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner specifically maintains that there is insufficient antecedent basis for the limitation "microfluidic channels" in claim 5.

Applicants respectfully maintain that no antecedent basis is needed for the term "microfluidic channels" in claim 5. The phrase does not include the definite article "the" or the word "said." Thus there is no implied or express reference to a prior recitation of the term "microfluidic channels." Nevertheless, claim 5 has been amended herein to provide a positive introduction to the limitation "microfluidic channels."

Claims Rejections - 35 U.S.C. §§ 102 and 103

Claims 1, 14, 15, 18 and 25 (per the corrected claim numbering) stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,945,293 to Siiman et al.

Claims 2-11 (per the corrected claim numbering) and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Siiman et al. in view of U.S. Patent No. 5,637,469 to Wilding.

Claims 16 (per the corrected claim numbering), 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Siiman et al. in view of U.S. Patent No. 6,319,469 to Mian et al.

Claims 18 -21, 24, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Siiman et al. in view of U.S. Patent No. 5,925,567 to Kraus et al.

Claim 1 In response to the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Siiman et al, that claim has been amended to incorporate the limitations of claim 15 (formerly numbered 14), Claim 15 is canceled herein in conformity to the inclusion of its subject matter in claim 1.

As set forth in claim 1, a sensing device comprises a vessel and a plurality of sensor beads located within the vessel to form interstitial spaces therethrough, the plurality of sensor beads comprising at least two different types of beads, each of the types of beads being made of a material different from the material of any other of the types of beads. The sensing device further comprises a plurality of biomolecules bound to at least a portion of the plurality of beads, each of the biomolecules having a fluorescent tag. The plurality of biomolecules comprises at least two different kinds of biomolecules, each of

the different kinds of biomolecules being bound to a respective type of the at least two different types of sensor beads. Pursuant to the amendment to claim 1, the sensing device comprises at least two sensing regions, each of the sensing regions including one of the at least two different kinds of biomolecules.

In the Office Action of December 28, 2005, the Examiner rejected claim 15 (under the number 14) as being taught by Siiman et al., col. 11, lines 15-18. Applicants respectfully traverse the rejection of claim 15 as being anticipated by Siiman et al. and maintain that claim 1 as amended herein set forth subject matter that not only distinguishes over Siiman et al. but is not obvious over Siiman et al. in view of the other references of record.

Siiman et al., col. 11, lines 12-20, reads as follows:

Thus, a method of the present invention comprises the steps of mixing a biological solution or suspension, e.g., whole blood, with at least two different stable colloidal particles as described above. Each different particle contains a different protein, e.g., a different antibody, conjugated thereto and each protein binds to a different epitope on a subpopulation of white blood cells. The particles and biological material are mixed for a time sufficient to permit the binding of the particles to each subpopulation of cells.

Nothing in this passage teaches or suggests that a sensing device comprise *at least two sensing regions, each of the sensing regions including a respective one of two different kinds of biomolecules*. Nowhere in the Siiman reference are multiple sensing regions discussed or implied. To the contrary, it appears that Siiman et al. teach that only one sensing region is to be used. Siiman et al. are interested primarily, if not exclusively, in the detection of different subpopulations of white blood cells in a biological suspension containing both red blood cells and white blood cells. Siiman et al. say

nothing about measuring the different populations of white blood cells at respective locations separate from one another.

This reading of Siiman et al is consistent with a further explanation of Siiman's measurement technique found at col. 11, lines 21-31:

Thereafter, the red blood cells in said biological solution/suspension are lysed and quenched. This mixture is analyzed in an instrument that distinguishes between the subpopulations of white blood cells bound by each different colloidal particle, thereby quantitatively enumerating at least two subpopulations of the white blood cells. Preferably, the instrument analyzes the mixture simultaneously and distinguishes between cells by shifting light scatter of targeted cells in VCS (i.e., volume, conductivity and light scatter) technology. In a preferred embodiment, the detection instrument is equipped with at least two lasers. One particularly desirable instrument for such use is a modified Coulter VCS instrument which is described in U.S. Pat. Nos. 5,125,737 and 5,492,833, incorporated herein by reference.

The statement that "the instrument analyzes the mixture simultaneously and distinguishes between cells by shifting light scatter of targeted cells" indicates that there is one mixture and one measurement site. The preferred instruments as disclosed in U.S. Pat. Nos. 5,125,737 and 5,492,833 use but one sensing site.

The claim amendments, if any, made herein are made without prejudice to applicants' right to pursue additional subject matter in a separate continuation or divisional application.

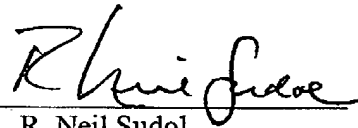
Conclusion

For the foregoing reasons, independent claim 1, as well as the claims dependent therefrom, is deemed to be in condition for allowance. An early Notice to that effect is earnestly solicited.

Should the Examiner believe that direct contact with applicant's attorney would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the number below.

Respectfully submitted,

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